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EXAMINER

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ART UNIT PAPER NUMBER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 16

Application Number: 09/407,278
Filing Date: September 29, 1999
Appellant(s): ENGWALL ET AL.

John C. Hammar
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed March 31, 2003.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

This appeal involves claims 17, 18 and 28.

Claims 29 and 32-35 have been canceled in the After-Final amendment filed December 20, 2002 that has been entered in view of Appellants' remarks.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is incorrect.

In view of Appellants' remarks the amendment after final rejection filed on December 20, 2002 has been entered.

The Supplemental Declaration after final rejection filed on April 21, 2003 has been entered.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 17-18 and 28 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

| | | |
|-----------|---------------|--------|
| 5,746,553 | ENGWALL | 5-1998 |
| 4,937,768 | CARVER et al. | 6-1990 |

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 17-18 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engwall (US Patent No. 5,746,553) in view of Carver *et al.* (US Patent No. 4,937,7687).

Engwall ('553) teaches the claimed process for manufacturing a composite part on a hybrid tool including providing a hybrid tool (30) having a graphite/epoxy (composite) top plate (32) (face sheet) (see col. 3, lines 63-65) with top mold surface (60) configured to a desired shape of one surface of the resulting composite part (said face sheet...having a mold surface the same shape and size as a surface of the part) (col. 4, lines 49-52), applying a release coating to said top surface (60) (col. 4, lines 34-35), laying up a plurality of resin impregnated plies onto said top surface (60) of top plate (32) to form a laid-up assembly, applying a vacuum bag over said laid-up assembly and sealing peripheral regions of said vacuum bag around said laid-up assembly, evacuating air from under said vacuum bag to cause air pressure outside said vacuum

bag to press said vacuum bag against said laid-up assembly and bonding/curing said resin to from said composite part (col. 6, lines 33-65).

Further, Engwall ('553) teaches removing said vacuum bag, uncovering said molded composite part, fixing said hybrid tool and molded composite part in a known position on a CNC machine tool bed (42) using provided location and attachment devices for accurately indexing and positioning tool (30) on the base 42 of the CNC machine tool. Further, Engwall ('553) teaches that retractable feet (94) on the support structure (34) of the tool (30) are retracted to engage a datum surface (96) on the underside of the support structure (34) with the machine tool bed (42), hence establishing the vertical position of the facing surface (60) of the tool (30) from the machine bed (42), which is a distance "known" to the machine program that controls the movement of the CNC mounted machine tool (44) (col. 7, lines 1-13) (probing reference features on said hybrid tool to accurately establish the position of said face sheet relative to a home position of the machine tool). It should be noted that the position and the orientation of the tool (30) on the machine bed (42) are established by location devices, including a set point (98) and a sine key (100) (col. 7, lines 13-16). Further, the position information of the machine tool (30) on the machine base (42) together with a tool configuration data set and part configuration data set are then input into the machine tool controller (46) (normalizing said machine tool part program to correspond to the actual position of the hybrid tool on the machine tool bed as determined by said probing of said hybrid tool reference features) in order to provide sufficient information to enable the machine tool controller (46) to guide the machine tool to perform the required cutting operations, including guiding a cutter around a peripheral groove (62), said cutter projecting into said peripheral

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groove and engaging the full thickness of said molded composite part to cut the peripheral edge (col. 3, lines 3-10). It should be noted that since Engwall ('553) specifically teaches that the orientation and alignment of the tool (30) is known in relation to the machine bed (42), then it is submitted that the orientation and alignment of the surface (60), which is the top surface of tool (30), is also known in relation to the machine bed (42). Furthermore, Engwall ('553) teaches trimming the edges of the resulting composite article and removing said resulting composite article from said tool.

Regarding claim 17, Engwall ('553) does not teach that a master mold having reference features thereon is used to form the top cover plate (32) (face sheet). Carver *et al.* ('768) teach the use of a fiber composite master mold to form a bond tool having trim lines, drilling patterns and surface locators (reference features) thereon (col. 5, lines 67-68). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a master mold to form a bond tool (top plate (32)) as taught by Carver *et al.* ('768) in the process of Engwall ('553) because, Carver *et al.* ('768) specifically teach that a master mold can be used to form a bond tool, whereas Engwall ('553) teaches the use of a bond tool in molding a composite part, and also because both references teach similar materials and bonding processes.

In regard to claim 18, Engwall ('553) teaches that top plate (32) (face sheet) is a carbon fiber/epoxy resin (graphite/bismaleimide) composite material (col. 3, line 64).

Specifically regarding claim 28, Engwall ('553) teaches a sine key (100). Further, Engwall ('553) teaches a set point (98) including a plate (102) having a vertical hole (104) and a pin (106) fitting into said hole (104) (spud) (col. 7, lines 15-23).

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(11) Response to Argument

Appellants argue that “*Engwall* fails to teach or to suggest a tool having a composite material as the mold surface” because, “the tool uses an Invar metal forming surface” and, “*Carver* fails to cure the deficiencies of *Engwall*” (see page 3, section VIII, of Appellants’ Brief filed March 31, 2003).

In response to Appellants’ arguments against the references individually, it should be noted that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Further, as shown throughout prosecution of the instant application, Engwall (‘553) specifically teaches in col. 3, lines 63-65, a graphite/epoxy (composite) tool. Furthermore, Engwall (‘553) specifically teaches the use of either Invar or a carbon fiber/epoxy resin composite material as equivalent alternatives for top plate (32) (see col. 3, lines 63-65).

Appellants argue that “*Engwall* is not properly applied as a reference” because the “present application is a CIP of *Engwall*” and that *Engwall* and the “present application are commonly assigned to the Boeing Company” (see pages 3-4, section VIII, of Appellants’ Brief filed March 31, 2003).

In response, the following procedural history summary is provided for the instant application and for the Engwall (‘553) reference:

(a) Engwall (‘553) has an effective filing date of April 8, 1996 and a publishing date of May 5, 1998;

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(b) the instant application is a divisional application of US Serial No. 09/072,716 filed May 5, 1998, now US Patent No. 6,012,883, which claims priority from US provisional application 60/045,742 filed on May 6, 1997;

(c) the instant application is also a continuation-in-part application of Engwall ('553).

Therefore, in view of (a) and (b), since the effective filing date of Engwall ('553) is prior to the effective filing date of the instant application and the publishing date of Engwall ('553) is after the effective filing date of the instant application, it submitted that Engwall ('553) qualifies as prior art under 35 U.S.C. 102(e)/103.

Regarding (c), although Appellants have perfected priority in the After-Final amendment filed December 20, 2002 to claim that the instant application is a "CIP of *Engwall*," it should be noted that the instant application and Engwall ('553) have different inventive entities and, according to MPEP §2136.04, the fact that the instant application and Engwall ('553) have one common inventor is immaterial. Ex parte DesOrmeaux, 25 USPQ2d 2040 (Bd. Pat. App. & Inter. 1992) (The examiner made a 35 U.S.C. 102(e) rejection based on an issued U.S. patent to three inventors. The rejected application was a continuation- in-part of the issued parent with an extra inventor. The Board found that the patent was "by another" and thus could be used in a 35 U.S.C. 102(e) /103 rejection of the application.). Although in Applied Materials Inc. v. Gemini Research Corp., 835 F.2d 279, 15 USPQ2d 1816 (Fed. Cir. 1988) the court held that whether "an application has named a different inventive entity than a patent does not necessarily make that patent prior art, " the issue "turns on what the evidence of record shows as to who invented the subject matter." In re Whittle, 454 F.2d 1193, 1195, 172 USPQ 535, 537 (CCPA 1972).

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Specifically, MPEP §2136.05 explains that in “the situation where one application is first filed by inventor X and then a later application is filed by X & Y, it must be proven that the joint invention was made first, was thereafter described in the sole applicant’s patent, or ** was thereafter described in the sole applicant’s U.S. patent application publication or international application publication, and then the joint application was filed. In re Land, 368 F.2d 866, 151 USPQ 621 (CCPA 1966). In “*In re Land*, separate U.S. patents to Rogers and to Land were used to reject a joint application to Rogers and Land under 35 U.S.C. 102(e) /103,” whereas in the instant application, the separate Engwall (‘553) reference is used to reject a joint application of Engwall *et al.* under 102(e)/103. Therefore, it is submitted that Engwall (‘553) qualifies as prior art under 102(e)/103.

Further, in order to disqualify Engwall (‘553) as prior art under 102(e)/103, Appellants argue that “*Engwall* and the present application are commonly assigned to the Boeing Company” (see pages 3-4, section VIII, of Appellants’ brief filed March 31, 2003). However, as stated in MPEP §2136.02, only “for applications filed on or after November 29, 1999,” may a rejection under 35 U.S.C. 102(e)/103 be withdrawn “if the applicant provides evidence that the application and prior art reference were owned by the same person, or *subject to an obligation of assignment to the same person*, at the time the invention was made” (emphasis added). As noted throughout prosecution of the instant application, the instant application was filed on September 29, 1999 and as such, it is not affected by The Intellectual Property and High Technology Technical Amendments Act of 2002 (Pub. L. 107-273, 116 Stat. 1758 (2002) (see page 9 of the Final Rejection mailed October 21, 2002).

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Under MPEP §706.02(1)(2), the Appellants have “the burden of establishing that subject matter is disqualified as prior art under 35 U.S.C. 103(c)” by “establishing that it was commonly owned at the time the claimed invention was made.” Since the instant application was filed prior to November 29, 1999, Appellants’ mere statement that “*Engwall* and the present application are commonly assigned to the Boeing Company” (see pages 3-4, section VIII, of Appellants’ brief filed March 31, 2003) does not overcome the 35 U.S.C. 102(e)/103 rejection.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

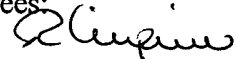
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April 30, 2003

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